Air Emissions

Stationary Internal Combustion Engines - Reciprocating - Gasoline

Engines Less than 250 HP

Date:

Company Name:

Facility Name:

Equipment Name:

Enter Rated Mechanical Output (hp) . . . . . .

Enter Number of Hours Operated per Year . . . . . .

The calculated emissions will be :

	c	d	f
Pollutant	**Emission Factor*** lbs/hp-hr	**Emission Rate** lb/hr c X rated mechanical output	**Emissions** ton/yr d X hr / 2000
Particulate Material - PM_{10}			
Sulfur Dioxide - SOX			
Nitrogen Oxides - NOX			
Carbon Monoxide - CO			
Volitile Organic Compound - VOC:			
Exhaust			
Evaporative			
Crankcase			
Refueling			
VOC Total			

*Emission Factors are from EPA AP42, 3.3 Gasoline and Diesel Industrial Engines. 10/96 If you have manufactureres emission rates you may use them. Please include the manufacturers literature as a reference for why you are using different factors. Emission factors used could become a permit condition, and the Division of Air Quality can ask for a test to confirm emissions.

Kilowatt-hour to Horsepower Conversion

Horsepower is equal to Kilowatt-hour times 1034, or HP = 1.34 x kWh

To convert Enter kWh here:

kWh = 200

HP = 268

Enter in the "Rated Mechanical Output" (Cell E14) Above

Air Emissions

Stationary Internal Combustion Engines - Reciprocating - Gasoline

Engines Less than 250 HP

Date:

Company Name:

Facility Name:

Equipment Name:

Enter Rated Mechanical Output (hp) **100**

Enter Number of Hours Operated per Year **10**

The calculated emissions will be :

	c	d	f
Pollutant	**Emission Factor*** lbs/hp-hr	**Emission Rate** lb/hr c X rated mechanical output	**Emissions** ton/yr d X hr / 2000
Particulate Material - PM_{10}	0.000721	0.072	**0.0004**
Sulfur Dioxide - SOX	0.000591	0.059	**0.0003**
Nitrogen Oxides - NOX	0.011	1.100	**0.0055**
Carbon Monoxide - CO	0.43900	43.900	**0.2195**
Volitile Organic Compound - VOC:			
Exhaust	0.0150	1.500	**0.0075**
Evaporative	0.000661	0.066	**0.0003**
Crankcase	0.00485	0.485	**0.0024**
Refueling	0.00108	0.108	**0.0005**
VOC Total	0.0216	2.159	**0.0108**

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Instructions

These calculation sheets have been written using Microsoft Excel.

Step 1 Fill in the name and identifying information.
Enter the hoursepower of the engine. Every engine gets a calculaton sheet.
The emissions shown are for engines less than 250 HP.

Step 2 Enter your hours of operation.
Remember to make some reasonable assumptions for operating hours for the equipment. A company maybe open 8 hours a day but only operate equipment 4-6 hours a day.

Step 3 Once you have entered in all the values click anywhere and the calculation will be done.
Remember the information is being used for permitting purposes, so be sure the numbers are right and realistic.

Step 4 If this is the only piece of equipment you are done with the calculations.
Save a copy by printing out the page and do a 'save as' and rename the file to keep an electronic copy.
You now need to determine what type of permit you need . .. . .

Step 5 If this is one of several emission points download the Air Emission Summary page and enter the equipment name and emissions.